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EXAMINER

BOCHNA, DAVID

ART UNIT PAPER NUMBER

3679

DATE MAILED: 09/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/678,013

Applicant(s)

ERICKSEN ET AL.

Examiner

David E. Bochna

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MW

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 June 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-114 is/are pending in the application.
- 4a) Of the above claim(s) 1-34 and 74-114 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 35-54, 56-69 and 71-73 is/are rejected.
- 7) ☒ Claim(s) 55 and 70 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Claims 1-34 and 74-114 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 6/21/04.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

3. Claims 38 and 39 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 38 and 39 recite the limitation "the second end" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 35-37, 40-42 and 45-47 are rejected under 35 U.S.C. 102(b) as being anticipated by Szabo '025.

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In regard to claim 35, Szabo discloses a coupling for conveying fluid between a conduit and a component of a fluid system, the coupling comprising:

a body 66 comprising a bore into which an end of the conduit 80 is insertable;

a gripping mechanism 84 that grips the end of the conduit to fix a position of the end of the conduit within the bore; and

a release mechanism 32 slidable with respect to the body to induce the gripping mechanism to release the end of the conduit, the release mechanism comprising two oppositely disposed release grips 32B, 32D extending outward from an axis of the bore to facilitate manual actuation of the release mechanism.

In regard to claim 36, wherein the gripping mechanism comprises a spring washer 82 seated in the bore, the spring washer comprising a plurality of fingers 84 that flex outward to receive the end of the conduit and extend inward to seat against the conduit in response to pressure tending to withdraw the end of the conduit from the bore,

wherein the release mechanism comprises a release ring 34 comprising an interior sleeve extending into the bore to induce outward flexure of the fingers to release the end of the conduit in response to sliding of the release ring.

In regard to claim 37, wherein the release ring further comprises an exterior sleeve 32 sized to encircle the second end of the body with a clearance sufficiently small to restrict interference with motion of the release mechanism from dirt in contact with the coupling.

In regard to claim 40, wherein each of the release grips comprises a contact surface 32 sized to receive pressure from a digit of a user to permit actuation of the release mechanism via pressure applied by hand against the release grips.

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In regard to claim 41, Szabo '025 discloses a coupling for conveying fluid between a conduit and a component of a fluid system, the coupling comprising:

a body 66 comprising a first end and a second end, the second end comprising a bore into which an end of the conduit is insertable;

a gripping mechanism 82 that grips the end of the conduit to fix a position of the end of the conduit within the bore; and

a release mechanism 32 slidable with respect to the body to induce the gripping mechanism to release the end of the conduit, the release mechanism comprising an exterior sleeve sized to encircle the second end with a clearance sufficiently small to restrict interference with motion of the release mechanism from dirt in contact with the coupling.

In regard to claim 42, wherein the gripping mechanism comprises a spring washer 74 seated in the bore, the spring washer comprising a plurality of fingers 84 that flex outward to receive the end of the conduit and extend inward to seat against the conduit in response to pressure tending to withdraw the end of the conduit from the bore,

wherein the release mechanism comprises a release ring comprising an interior sleeve extending into the bore to induce outward flexure of the fingers to release the end of the conduit in response to sliding of the release ring.

In regard to claim 45, wherein the clearance is less than about 0.02 inches.

In regard to claim 46, wherein the exterior sleeve 32 comprises an inside diameter that is nominally equal to an outside diameter of the second end, wherein the exterior sleeve is deformable to provide the clearance in response to assembly of the release mechanism with the second end.

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In regard to claim 47, the clearance extends along a length of the second end of at least .25 inches.

6. Claims 35-36, 38-53, 62-63 and 67 are rejected under 35 U.S.C. 102(b) as being anticipated by Abe et al. '188.

In regard to claim 35, Abe et al. discloses a coupling for conveying fluid between a conduit and a component of a fluid system, the coupling comprising:

a body 3 comprising a bore into which an end of the conduit is insertable;

a gripping mechanism 4 that grips the end of the conduit to fix a position of the end of the conduit within the bore; and

a release mechanism 10 slidable with respect to the body to induce the gripping mechanism to release the end of the conduit, the release mechanism comprising two oppositely disposed release grips (pieces between slits 12 that contain hole 13) extending outward from an axis of the bore to facilitate manual actuation of the release mechanism.

In regard to claim 36, wherein the gripping mechanism comprises a spring washer seated in the bore, the spring washer comprising a plurality of fingers 4 that flex outward to receive the end of the conduit and extend inward to seat against the conduit in response to pressure tending to withdraw the end of the conduit from the bore,

wherein the release mechanism comprises a release ring 10 comprising an interior sleeve (10 is an interior sleeve because it is inserted inside 15 extending into the bore to induce outward flexure of the fingers to release the end of the conduit in response to sliding of the release ring.

In regard to claim 38, wherein the release mechanism comprises an exterior sleeve 8

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disposed to encircle the second end to define an annular gap between the second end and the exterior sleeve, the release mechanism and the body comprising a first retention 14 feature protruding into the annular gap to establish a limited range of motion for the release mechanism.

In regard to claim 39, wherein the release mechanism comprises an exterior sleeve 8 disposed to encircle the second end and an annular wall that extends between the interior and exterior sleeves, wherein the annular wall 9 abuts the second end to limit motion of the release ring with respect to the body, wherein the release grips extend substantially coplanar with the annular wall.

In regard to claim 40, wherein each of the release grips (part between slits 12) comprises a contact surface sized (left end surface of 8) to receive pressure from a digit of a user to permit actuation of the release mechanism via pressure applied by hand against the release grips.

In regard to claim 41, Abe et al. discloses a coupling for conveying fluid between a conduit and a component of a fluid system, the coupling comprising:

a body 3 comprising a first end and a second end, the second end comprising a bore into which an end of the conduit is insertable;

a gripping mechanism that grips the end of the conduit to fix a position of the end of the conduit within the bore; and

a release mechanism slidable with respect to the body to induce the gripping mechanism to release the end of the conduit, the release mechanism comprising an exterior sleeve sized to encircle the second end with a clearance sufficiently small to restrict interference with motion of the release mechanism from dirt in contact with the coupling.

In regard to claim 42, wherein the gripping mechanism comprises a spring washer seated in the bore, the spring washer comprising a plurality of fingers that flex outward to receive the

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end of the conduit and extend inward to seat against the conduit in response to pressure tending to withdraw the end of the conduit from the bore,

wherein the release mechanism comprises a release ring comprising an interior sleeve extending into the bore to induce outward flexure of the fingers to release the end of the conduit in response to sliding of the release ring.

In regard to claim 43, wherein the release mechanism comprises an annular wall 9 that extends between the interior and exterior sleeves, wherein the annular wall abuts the second end to limit motion of the release ring with respect to the body,

wherein the clearance is small enough to substantially prevent dirt entry between the annular wall and the second end.

In regard to claim 44, wherein the exterior sleeve defines an annular gap between the second end and the exterior sleeve, the release mechanism and the body comprising a first retention feature protruding into the annular gap to establish a limited range of motion for the release mechanism.

In regard to claim 45, wherein the clearance is less than about 0.02 inches.

In regard to claim 46, wherein the exterior sleeve comprises an inside diameter that is nominally equal to an outside diameter of the second end, wherein the exterior sleeve is deformable to provide the clearance in response to assembly of the release mechanism with the second end.

In regard to claim 47, the clearance extends along a length of the second end of at least .25 inches.

In regard to claim 48, Abe et al. discloses a coupling for conveying fluid between a conduit and a component of a fluid system, the coupling comprising:

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a body comprising a first end and a second end, the second end comprising a bore into which an end of the conduit is insertable;

a gripping mechanism that grips the end of the conduit to fix a position of the end of the conduit within the bore; and

a release mechanism slidable with respect to the body to induce the gripping mechanism to release the end of the conduit, the release mechanism comprising an exterior sleeve disposed to encircle the second end to define an annular gap between the second end and the exterior sleeve, the release mechanism and the body comprising a first retention feature protruding into the annular gap to establish a limited range of motion for the release mechanism.

In regard to claim 49, wherein the release mechanism comprises; an annular wall that extends between the interior and exterior sleeves, wherein the annular wall abuts the second end to limit motion of the release ring with respect to the body,

wherein the clearance is small enough to substantially prevent dirt entry between the annular wall and the second end.

In regard to claim 50, wherein the release mechanism and the body further comprise a second retention feature 14 protruding into the annular gap on an opposite side of the second end from the first retention feature such that the second retention feature cooperates with the first retention feature to establish the limited range of motion for the release mechanism.

In regard to claim 51, wherein the release mechanism and the body further comprise a slot 13 within which the first retention mechanism is movable to establish the limited range of motion for the release mechanism via abutment of the first retention mechanism with an end of the slot.

In regard to claim 52, wherein the first retention feature is fixed with respect to the second end and the slot is formed in the exterior sleeve.

In regard to claim 53, wherein the first retention feature 14 comprises a ramp disposed to facilitate assembly of the release mechanism with the second end by inducing deformation of the exterior sleeve in response to pressure urging the release mechanism toward the second end, wherein the first retention feature further comprises a plateau (flat surface on 15 from which 14 protrudes) adjoining the ramp to resist disassembly of the release mechanism from the second end via abutment of the plateau against the end of the slot.

In regard to claim 62, Abe et al. discloses a coupling for conveying fluid between a conduit and a component of a fluid system, the coupling comprising:

a body comprising a bore into which an end of the conduit is insertable, the conduit comprising a size selected to permit watertight engagement of the body and the end of the conduit;

a gripping mechanism that grips an end of the conduit to fix a position of the end of the conduit within the bore; and

a release mechanism slidable with respect to the body to induce the gripping mechanism to release the end of the conduit;

wherein at least one of the group consisting of the body and the release mechanism comprises an indicator (the size of the bore of 16 is a visual indicator as to how big of a conduit will fit into the bore) that indicates that the coupling is dimensioned to receive the conduit.

In regard to claim 63, wherein the indicator indicates the size of the conduit (the size of the bore also indicates the size of the conduit that will fit into it), wherein the size is an outside

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diameter of the conduit that is receivable within the bore to provide the watertight engagement and to permit the gripping mechanism to securely grip the end of the conduit.

In regard to claim 64, wherein the indicator comprises a color of at least part of the body (the material that 16 is constructed from will inherently have some color associated with it).

Claim 67 is considered a product by process claim and the process in which the product is made is given little patentable weight as long as the prior art contains all of the structural limitations recited by the applicant.

7. Claims 68-69 and 71-73 are rejected under 35 U.S.C. 102(b) as being anticipated by Graves.

In regard to claim 68, Graves discloses a swing joint for coupling a conduit to a component of a fluid system, the swing joint comprising:

a first coupling comprising:

a body 10 having a first end 11 and a second end 9a having a bore into which an end of the conduit is insertable; and a gripping mechanism 21 that grips the end of the conduit to fix a position of the end of the conduit 1 within the bore; and a second coupling comprising:

a body 12 having a first end, a second end having a bore into which the first end of the body of the first coupling is insertable, and a bend disposed to alter a flow orientation of fluid flowing between the first and second ends; and a gripping mechanism that grips the first end of the body of the first coupling to fix a position of the first end of the body of the first coupling within the bore;

wherein the first end of the body of the first coupling is insertable into the bore of the body of the second coupling along a plurality of orientations to permit disposition of the bend at a plurality of orientations with respect to the first coupling.

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In regard to claim 69, wherein the first end 11 of the body of the first coupling comprises a tube having an outside diameter that is substantially the same as an outside diameter of the conduit 3.

In regard to claim 71, wherein the body of the first coupling comprises a bend disposed to alter a flow orientation of fluid flowing between the first and second ends of the body of the first coupling.

In regard to claim 72, wherein the body of the second coupling comprises a bend disposed to alter a flow orientation of fluid flowing between the first and second ends of the body of the second coupling, wherein each of the bends comprises an angle of about ninety degrees to permit orientation of the first end of the body of the second coupling at orientations including parallel to the conduit and perpendicular to the conduit.

In regard to claim 73, wherein the swing joint is part of an irrigation system for distributing water to soil, wherein the conduit conveys water underground, wherein the end of the conduit and the first coupling are buried.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 54 and 56-58 and 60 are rejected under 35 U.S.C. 103(a) as being unpatentable over Abe et al. in view of Zithowie et al.

In regard to claim 54 Abe et al. discloses a coupling for conveying fluid between

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a conduit and a component of a fluid system, the coupling comprising:

a body comprising a first end and a second end, the second end comprising a bore into which an end of the conduit is insertable, the body further comprising,

a gripping mechanism that grips an end of the conduit to fix a position of the end of the conduit within the bore; and

a release mechanism slidable with respect to the body to induce the gripping mechanism to release the end of the conduit, but Abe et al. does not disclose a bend disposed to alter a flow orientation of fluid flowing between the first and second ends. Zithowie et al. demonstrates that using coupling bodies shaped in bent or T-shaped configurations are common and well known in the art. Therefore it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the body of Abe et al. to include a bent or T-shaped body, because the practice of forming coupling bodies in bent or T-shaped configurations is common and well known in the art as demonstrated by Zithowie et al.

In regard to claim 56, wherein the bend comprises an angle of ninety degrees.

In regard to claim 57, wherein the body further comprises a first branch that terminates in a third end in fluid communication with the first and second ends through the body.

In regard to claim 58, wherein the first branch extends from the bend such that the coupling has a T-shape.

In regard to claim 59, Abe et al. in view of Zithowie et al. discloses a coupling body with three branches, but not four. However, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to make the coupling body with four branches because duplicating the components of a prior art device is a design consideration within the skill of the art. In re Harza, 274 F.2d 669, 124 USPQ 378 (CCPA 1960).

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In regard to claim 60, wherein the coupling is part of an irrigation system for distributing water to soil, wherein the first end of the body is integrally formed with an irrigation component of the irrigation system.

In regard to claim 61, wherein the first end comprises a second bore into which an end of a second conduit is insertable, the coupling further comprising:

a second gripping mechanism that grips the end of the second conduit to f.1.1: a 12 position of the end of the second conduit within the second bore; and
a second release mechanism slidable with respect to the body to induce the second gripping mechanism to release the end of the second conduit.

10. Claims 65 and 66 are rejected under 35 U.S.C. 103(a) as being unpatentable over Abe et al.

Abe et al. discloses a coupling a conduit that inherently has a color, but does not disclose that the colors are the same or that they are blue. However, it would have been obvious to a person having ordinary skill in the art to make the coupling and conduit blue because a change in ornamental design having no mechanical function is an aesthetic design consideration within the skill of the art. In re Seid, 161 F.2d 229, 73 USPQ 431 (CCPA 1947).

Allowable Subject Matter

11. Claims 55 and 70 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. LeMay et al., Martin-Cocher et al., Luft, Morrison, Miller, Klinger, Dennany, Jr.,

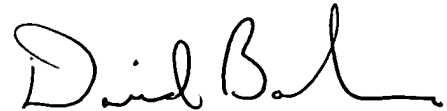
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Hayman, Gallagher and EPO Publication 240,452 all disclose similar couplings common in the art.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Bochna whose telephone number is (703) 306-9040. The examiner can normally be reached on 8-5:30 Monday-Thursday and every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel P. Stodola can be reached on (703) 308-2686. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-2168.

A handwritten signature in black ink, appearing to read 'David Bochna', with a stylized flourish at the end.

David Bochna
Primary Examiner
Art Unit 3679
September 2, 2004